

Microcomputer Newsletter

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New Zenith Products

Zenith has announced several new microcomputers that will be available through the University Microcomputer Discount Program. We have had only a brief look at the machines and do not yet have units in our lab for you to try (as of the deadline for this issue of the newsletter, i.e., early June). We were able to spend a few hours with the machines and will write a more extensive review once we have a chance to work with the equipment for a while.

So, bearing in mind that our information is incomplete and subject to change, here is what we do know: Zenith is expanding its line of IBM compatibles to include an inexpensive entry-level IBM-PC compatible; a transportable version of the entry-level machine; an IBM-PC compatible lap-top portable; an IBM-AT compatible; and an enhanced version of the Z-150 (the Z-150 is an IBM-PC compatible). Here are the details:

Entry-level machines

The entry level machines are intended for users who are interested in an inexpensive microcomputer suitable for word processing. There are several configurations:

- | | | |
|-----------|--|---------|
| ZF-148-21 | desktop machine with 128K memory, one serial and one parallel port, keyboard, one double-sided (360K) 5.25" floppy disk drive, composite and RGB video output | \$ 885 |
| ZF-148-42 | same as ZF-148-21 (above) except 256K memory and two 5.25" floppy disk drives | \$ 1040 |
| ZF-138-21 | transportable machine with 128K memory, one serial and one parallel port, keyboard, one double-sided (360K) 5.25" floppy disk drive, 7" diagonal amber monitor | \$ 1040 |
| ZF-138-42 | same as ZF-138-21 (above) except 256K memory and two 5.25" floppy disk drives | \$ 1195 |

Both the Z-138 and Z-148's memory can be expanded to 640K by plugging in memory chips (you can use either 64K or 256K chips). Neither machine comes with any expansion

(New Zenith Products continued on page 6)

Review: Microsoft CHART for the IBM-PC

Microsoft CHART for the IBM-PC and compatibles is an easy-to-use yet versatile program that enables you to present quantitative information in the form of a graph. It is a menu-driven program, which means that all options are presented on the screen for you to select.

Creating a Chart

CHART has three major sections: List, Entry, and Chart. In List, you identify your data series by giving it a name, a category name, a value name, a category type, category start, increment and increment period in response to screen prompts. Suppose, for example, you are comparing enrollment in the different colleges within the University over the last ten years. The name of the first data series is "CLA." The category name is "Year" and will be the label for the horizontal axis of the chart. The value name is "Enrollment" and will be the label for the vertical axis. Category type is "Date." Category start is "1975" and will be the first to appear along the horizontal axis. When you set increment to be "1" and increment period to be "Year," CHART will automatically provide the remaining dates for the horizontal axis. You are now finished specifying the organization of the CLA data. The information for the other data series (IT, Education, etc.) is exactly the same as for CLA except for the name of the series. When you are finished typing in the information for each series, you have a List of all the colleges within the University whose enrollments you want to compare. You have now established all the information needed for a chart except the data points themselves. They are entered on the Entry screen.

The Entry screen is where you type in the values you want to have graphed. You enter data for one series (or college) at a time. Because the series is a Date series, CHART calculates the horizontal values for you (1975, 1976,...); all you have to do is enter the enrollment figures. When you have finished entering the data, you are ready to prepare a chart.

You can enter data directly into CHART's Entry screen, or you can import it from Multiplan, dBASE II, or any program that creates DIF,

SYLK, or ASCII files, either in columns or using delimiters to separate fields.

Displaying and Printing Charts

The heart of the package is the Chart section. Once you have organized and entered your data, you will want to graph it. CHART comes with eight standard graph types: area, bar, column, high-low, line, pie, scatter, and mixed. Each type (except high-low) has several variants, providing a total of 45 standard charts. Each type also includes options for headings, labels, axis ticks, shadings, and legends. You can select one of the available types and use the automatic features, or you can customize your chart by manually specifying options like font, color, shading, and border. CHART provides 16 shadings (cross-hatched, vertical stripes, etc.) and five line patterns (solid, dotted, etc.).

CHART supports five fonts for dot-matrix printers and eight for plotters. If the output device doesn't have the font you selected, CHART will choose its closest approximation. CHART is also very clever about handling colors. It has 26 colors to choose from. If your printer doesn't have colors that you selected, CHART will automatically substitute an approximation. If you are using a plotter and select more colors than the plotter can handle at one time, you will be prompted to change pens. CHART supports 30 printers and plotters, including all the IBM-compatible printers and plotters available under the University's discount program *except* the new IBM Proprinter.

CHART provides a few analysis functions you may find useful. If you select Analysis, you can then choose among Growth, Trend, Percentage, and Statistics. The first three are based on formulas given in the manual and can be plotted on your chart. Statistics displays some descriptive statistics about your data: N, minimum, maximum, mean, median, standard deviation, and correlation coefficient of the data series. The descriptive statistics are not charted.

Help

CHART has a very good manual, divided into three major sections: Learning CHART, Using CHART, and Reference. The Learning section is a tutorial that covers the major features of CHART with clear examples provided on a disk and pictures of what the screen should look like. Using CHART goes into greater depth. It gives you a description of each new function encountered,

(CHART continued on page 5)

Review: WordPerfect for the IBM-PC

WordPerfect is published by Satellite Software International (SSI). WordPerfect (WP) is a word processing package that runs on the IBM PC, XT, AT, and compatibles (including the Zenith Z-150). WP requires a minimum of 192K of RAM, and DOS version 2.0 or later. You can copy the entire package onto a hard disk. If you don't have a hard disk, you will need a system with two floppy disk drives. WordPerfect can read files written by some other software packages; WP's translation feature lets you convert WordStar, Mail Merge, ASCII, and DIF files to and from WordPerfect.

Overview

Generally, what you see on the WordPerfect screen is what you get on paper. For instance, the screen shows underlined and bold text. Although WP displays underlined and bold text on screen, it is not a true what-you-see-is-what-you-get package like MacWrite on the Macintosh. On the IBM-PC screen you only see characters in one height and one width, regardless of the type face that is used when the characters are printed. WordPerfect does let you review its normally hidden format and control codes with a reveal feature. Reveal lets you look at margin settings, underline and bold controls, and the like. You can edit in this reveal mode.

This review covers SSI's recently released Version 4.0 of WordPerfect. SSI added some new features since the previous version. The new manual is easier to read and use. SSI added extensive on-screen help, and regrouped the alt, shift, control, and function key combinations. However, if you learned WordPerfect on Version 3.0, you can still use the old key arrangement with 4.0. Version 4.0 of WP highlights blocks of text when you mark a block to move or delete it. Overall WordPerfect went from a very good package in its previous versions to an excellent one in Version 4.0.

Using WordPerfect

Beginners should ignore the advanced and speed features in WordPerfect's over 100 menu choices and concentrate on basic features. By ignoring the advanced features of WordPerfect some beginners are able to write, edit and print a document within an hour of installing the program.

To take advantage of any of WP's features you use IBM-PC's function keys alone or with the control, shift, and alt keys. To invoke frequently used commands like cancel, underline, save, exit, and help, you hit only one key. Less frequently used commands are invoked by holding down the control, shift, or alt key and typing one of the function keys. The PC's arrow keys are used to move the cursor one character at a time. You can combine the arrow keys (and other numeric keypad keys such as home and end) with the control key to move the cursor through your file in larger increments than one character at a time.

Version 4.0's most important features are clustered around a few function keys. For example, to change margins and tabs, hold down the shift key and press the F8 key. Use the F8 key with the alt key, and you can insert a page header or footer. If you have the Hewlett-Packard LaserJet you can use the control key with the F8 key to choose a new font or a new pitch.

The search and replace features are clustered on the F2 key. Pressing the F2 key begins a search. WP will then prompt you to enter the word or characters you want to find. WordPerfect also searches for function codes. So, instead of typing text in response to the prompt you can press the function key combination you want to find. WordPerfect also has a search and replace function. For example, you can tell WordPerfect to replace all occurrences of *WP4* with *WordPerfect Version 4.0*. To begin a search and replace function, press and hold the alt key, then press the F2 key.

WordPerfect also searches for misspellings. You can use this feature as your first proofreader. To access WP's 100,000 word dictionary, hold down the control key and press the F2 key. WordPerfect stops at unknown words and highlights them. You can edit an unknown word, skip it, add it to the dictionary, or ask WordPerfect to suggest alternate spellings.

Text Formatting and Reformatting

You can set and save text formats by line, paragraph, page, or document. When you change text in a paragraph, the margins, the size of a footnote, delete or insert text, WordPerfect automatically rejustifies lines and repaginates your file. This is a marked improvement over WordStar (WordStar doesn't automatically).

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(WordPerfect continued from page 3)

Unlike MicroSoft Word, you do not have to repaginate a document after making changes.

WordPerfect can be customized to fit your preferences. WordPerfect has a set-up menu that allows you to change one or all initial settings for margins, page number position, and the like.

Advanced Features

WordPerfect supports sub and superscripts in your text (although your printer may not). You can switch between two files: use the shift key with the F3 key to switch the entire screen display back and forth between file 1 and file 2. This feature allows you to simultaneously edit or create two files.

You can automatically generate an outline or a table of contents by using the alt key with the F5 key to mark your words in your text. You can also mark text for insertion (redline) or deletion (strikeout).

WordPerfect supports both footnotes and endnotes. When you insert or delete foot and endnotes, WordPerfect automatically renumbers them. WordPerfect has several mail/field merge commands. These commands are useful for combining a list of names and addresses with a letter and generating personalized form letters.

WordPerfect can display special letters and symbols like π and \ddot{a} and print them *if your printer supports those symbols*. You choose 48 symbols from a set of over 150 foreign and graphic symbols that WordPerfect supports. The 48 symbols you can use are selected from the set-up menu. In the set-up menu, you tell WordPerfect that you want to define keys. Then choose the symbol you want, and pair the symbol with the alt (or control) key and with any key (a-z). For example, you could pair the alt key with the s key to produce β . Thereafter, when you press the alt and s keys simultaneously, you will see β on the screen.

WordPerfect has a macro feature that can be used to memorize keystrokes. You can capture margin settings or text in a WordPerfect macro. Later you can play the keystrokes back into a new or an old file and avoid re-typing the keystrokes in the macro.

Help

WordPerfect comes with a color coded keyboard overlay, on-screen help, and a printed quick

reference booklet (in addition to the manual). To use the on-screen help, press the F3 key. You get help by selecting from an alphabetical list of features or you can get detailed help on any command key combinations. If you register your copy of WordPerfect you can also telephone SSI's toll free help line. Registration and phone-in help are free. All the people I talked to at SSI were friendly and offered immediate help.

WordPerfect's manual includes over 200 pages of tutorials. The tutorial's color coded, step-by-step instructions include pictures of what the screen should look like. The manual is well-organized and easy to read. However, the on-screen help is so extensive some users refer to the manual only occasionally.

Printer Support

WordPerfect supports over 30 printers and supports multiple fonts on printers such as Epson's LX-80, FX-80, and LQ-1500, and on Hewlett-Packard's LaserJet. To set up WordPerfect to send output to a printer, select the printer from a menu. Then let WordPerfect know whether the printer is a parallel or a serial printer, and in what form you will send paper to the printer- continuous, sheet feed, or hand fed. If your printer requires a baud rate, parity, stop bits, or character length different from the default settings, you can change those settings. If your printer is not on WordPerfect's menu, SSI suggests you call their toll-free help line.

WordPerfect queues files you send to the printer. You can continue to edit or create other files while a file is printing.

Drawbacks

While you are learning the program, WordPerfect's nearly blank screen can be intimidating. You cannot get a screen display that is the equivalent of the keyboard overlay.

The screen's only constant help display is the status line. It displays the page, line, and character position. The status line also shows whether file 1 or file 2 is on the screen, and if you've chosen multiple columns, it shows a column number.

The status line does not name your current printer. Since WordPerfect permits you to choose six printers, you can forget you changed printers until you get garbled print, or you may mistype a printer menu choice and inadvertently send text to the wrong printer. (WordPerfect continued on page 5)

(CHART continued from page 2)

followed by step-by-step instructions to carry out the function, plus references to other parts of the manual for more details. CHART also provides on-line help. Typing Alt-H will give you a screenful of information on the menu option that was highlighted. You can also get a Help Screen for general information.

Summary

CHART is a very good program if you want to create a graphical representation of data. With minimal effort you can produce a very professional looking graph by using one of the standard graph types and the automatic features. If you want, you can spend a little more time and customize your graph by taking advantage of CHART's wealth of special features including colors, fonts, and borders.

CHART requires a minimum of 128K of memory, but 256K is recommended and is needed to get all the capabilities mentioned here (such as font selection). CHART also requires a graphics display adapter (e.g., the IBM, Zenith, Hercules, or Paradise graphics display adapters) and an appropriate monitor.

We have a copy of CHART at the Micro Lab in 125 Shepherd if you would like to look at it or try it out. CHART can be ordered at the Minnesota Bookcenter in Williamson Hall for \$150.

(WordPerfect continued from page 4)

Summary

Despite its drawbacks, we believe WordPerfect Version 4.0 is a package you should consider if you use an IBM-PC to produce more than an occasional business letter or simple report. It is a word processing package we highly recommend for use with the Hewlett-Packard LaserJet because it allows you to use the LaserJet without the complicated installation procedure necessary for other word processing packages (such as WordStar).

The bookstore sells WordPerfect Version 4.0 for \$248. (If you have version 3.0 you can order version 4.0 upgrades directly from Satellite Software International for \$40.00.)

Miscellaneous Notes:

• WordPerfect Printer Support •

Satellite Software International (SSI) now has added support for the Hewlett-Packard ThinkJet, IBM Proprinter, and IBM Color Jetprinter to WordPerfect. Registered owners of WordPerfect Version 4.0 can call SSI's toll-free help line to ask for a diskette with these printer drivers.

• JAZZ for the Macintosh •

Jazz, Lotus Development's product for the Macintosh, is now available at the Williamson Hall Bookcenter for \$275. We will review Jazz in next month's newsletter.

• Mac public domain software •

Our local Apple sales representative recently gave the Micro Group a set of 35 disks containing public domain software for the Apple Macintosh. As we looked at the disks we thought about what a nightmare it would be to help microcomputer users who are trying to resolve *real problems* while thousands of Mac owners tried to copy 35 disks. We decided it couldn't possibly work.

In the interest of preserving our sanity, we have given the campus Macintosh Users Group the public domain disks. If you are interested in public domain software, contact the Mac Users Group. In addition to the 35 public domain disks, the users group has downloaded some of the public domain software and documentation that is available from CompuServe.

The Mac Users Group contact is Ramsey Smith. You can telephone Ramsey at 623-0804 (between 4:00 and 7:00 pm) or better yet, go to the next Mac Users Group meeting. Meetings are held on the third Thursday of each month in the Architecture building jury room, from 7:30 - 9:30 pm.

• Do You Analyze Images? •

We would like to make contact with persons actively involved with image analysis on the IBM-PC.

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slots. You can buy an optional card which gives you *one* IBM compatible expansion slot, but that is the extent of the expansion possible with these machines. For people who are using the micro for word processing this should not be too much of a hardship since you can put all the memory that the MS-DOS software can handle (640K) in the machine without buying memory expansion cards, and both a serial and parallel port are standard.

The display adapter in the Z-138 and Z-148 is functionally equivalent to IBM's Color/Graphics display adapter, so you will not need to buy any cards to display graphics. Both the Z-138 and Z-148 have an 8088 central processing unit (CPU) and a socket for an 8087 numeric co-processor. The 8088 is the same CPU as the IBM-PC uses. One interesting feature of the Z-138 and Z-148 CPU is that you can run it at either 4.77 MHz (the same speed as the IBM-PC) or at 8 MHz. There is a switch located on the front of the machine that selects either 8 or 4.77 MHz. Running the processor at the higher speed will make programs execute more quickly. The slower speed is used when a program does not function properly at 8 MHz. According to Zenith, the Z-138 and Z-148 will be available sometime in July.

Lap-top Portable

The ZFL-171-42 is a 15-pound IBM compatible portable. Here is the standard configuration:

ZFL-171-42 256K memory (expandable to 1M),
two 5.25" floppy disk drives,
keyboard, internal 25 line LCD
display, one serial port, one
parallel port \$1405

An optional battery pack, carrying case, and 300/1200 baud modem are available. Note that although you can expand the Z-171's memory to 1 MByte, MS-DOS can only use 640K of memory.

The Z-171's LCD display is backlit with a blue electroluminescent panel which improves the readability of the display immensely. The display has black characters on a sort of swimming pool blue background. I would much rather read the Z-171's LCD display than either the Hewlett-Packard or the Data General lap-top's displays. How long the batteries last during real use of the Z-171 is the big unanswered question about this machine. Zenith says that the Z-171 should be available sometime in July.

Zenith's IBM-AT compatibles

The Z-200 series is Zenith's line of IBM-AT compatible microcomputers. The Z-200 series uses the same 16-bit processor (the 80286) as the IBM-AT. The Z-200 also has a socket for an optional 80287 numeric co-processor. Here are the standard configurations:

ZF-241-81 512K memory, 6 expansion slots,
one 1.2 MByte floppy disk drive,
one serial port, one parallel port,
MS-DOS version 3.1 \$ 2290

ZW-241-82 512K memory, 6 expansion slots,
one 1.2 MByte floppy disk drive,
one 20 MByte hard disk drive, one
serial port, one parallel port,
MS-DOS version 3.1 \$ 3205

An optional low-capacity (360K) floppy disk drive is available, as well as a memory expansion card that can hold up to 1.5 MBytes (the Z-200 series hardware can access a maximum of 16 MBytes, but (alas) MS-DOS can only use 640K). You can also buy an additional 20 MByte hard disk for the Z-200.

Note that the Z-200 machines *do not* include a monitor or a display adapter. You will need to buy a display and display adapter.

One of the more interesting claims Zenith made for the Z-200 was that its performance is 30% better than the IBM-AT for RAM memory intensive operations. We were unable to test this claim, but Zenith says that this performance improvement is possible because the Z-200 CPU does not have any wait-states when accessing memory and the IBM-AT does. It will be interesting to run a few benchmarks when we get a Z-200. Zenith says that they will begin shipping the Z-200s in August.

Enhanced Z-150

The Z-150 has been enhanced so that the CPU can run at both 8 and 4.77 MHz. As on the Z-130 and Z-140 series machines, this feature is switch selectable.

Caveat

Once again, we want to remind you that we have not had a chance to use these machines for more than a few hours. We will know much more once we have these machines at the Micro HelpLine. We'll let you know more when the machines have arrived.

Software Site Licenses

We are interested in promoting site licenses for the University as a way to save the University money on software. Under a site licensing agreement the University purchases the rights for a piece of software for use on the University campus. Typically, the cost of purchasing a site license is considerably less than the cost of buying the same number of programs individually. We have one license agreement in place, and are considering another.

MicroPro and the University have an agreement that allows the University to purchase copies of WordStar, WordStar 2000, and WordStar Professional for educational purposes at 50-90% discounts. The software must be used as part of a course.

SYSTAT, Inc. publishes a statistics package for the IBM-PC that can do multiple and stepwise linear regression, ANOVA, ANCOVA, MANOVA (including unbalanced, nested, missing cells, and repeated measures designs), t-tests, correlation matrices, non-parametric statistics, cross-tabs, and other common statistical operations.

If we can get commitments from enough potential users (we need between 20 and 30 users), we will purchase a site license for SYSTAT. With a site license, the cost per user will be \$200. In the absence of a site license, it will cost everyone who buys a copy of SYSTAT \$400.

If you are interested in participating in either the MicroPro or SYSTAT site license agreements, call the Micro HelpLine (376-4276) or write us.

AT&T Micros

You can now purchase the AT&T PC 6300 (an IBM-PC compatible) and the PC 7300 (AT&T's UNIX microcomputer) through the University Microcomputer Discount Program. In fact, the AT&T agreement was finalized on the day of the newsletter's deadline. Here are some of the prices:

PC 6300 256K memory, two floppy disk drives, keyboard, monochrome monitor (green), MS-DOS \$ 1810

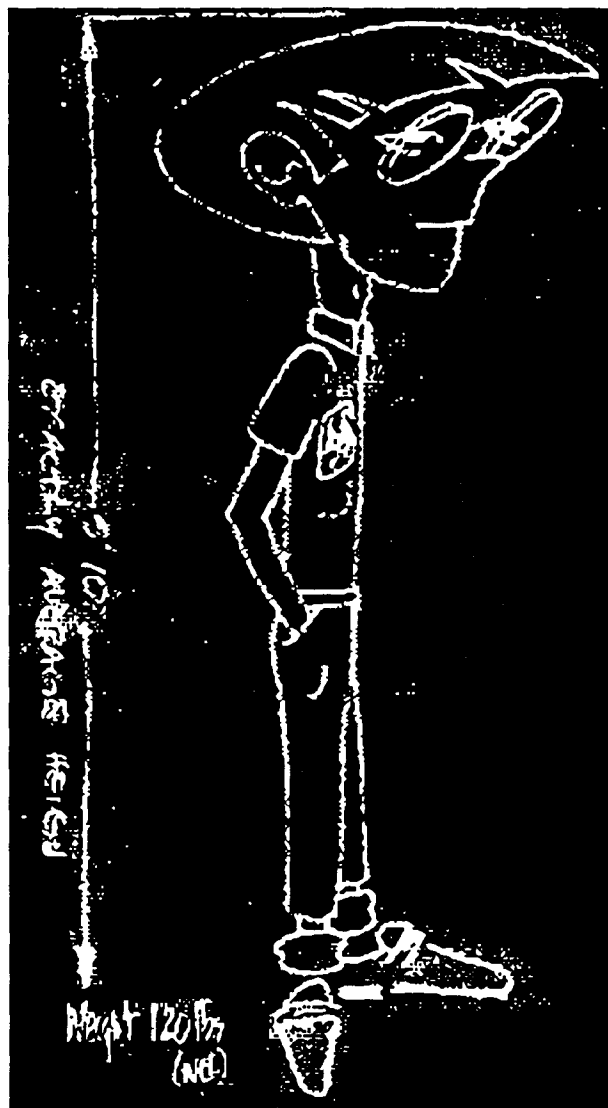
PC 7300 1 MByte memory, 10 MByte hard disk drive, UNIX version V \$ 3955

PC 7300 1 MByte memory, 20 MByte hard disk drive, UNIX version V \$ 4350

Software for the PC 7300:

AT&T UNIX utilities	\$ 315
AT&T UNIX development tools	\$ 250
LPI C programming language	\$ 345
dBase III for the PC 7300	\$ 440

Blueprint for a computer nerd



- W. Jedlicka

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